

## REMARKS

This Response supplements the Response filed 22 March 2010. Claims 1-6, 9, 12-13 and 25-28 were pending and claims 14-17, 19-20 and 23-24 were withdrawn from consideration. Support may be found in the specification and the claims as originally filed. No statutory new matter has been added. Therefore, reconsideration and entry of the claims as amended are respectfully requested.

### Interview Summary

Applicant greatly appreciates the Examiner taking the time to conduct a personal interview on 7 April 2010. During the interview, Applicant explained that Sung discloses a layer which is essentially equivalent to two-layers due to the gradient of the two catalysts, i.e. a greater amount of catalyst A is on the bottom and a greater amount of catalyst B is at the top with an indiscrete boundary between the top layer and the bottom layer. Sung achieves the gradient by separate milling to get two different particle sizes such that one "floats" to the top and the other "sinks" to the bottom. Applicant explained that the instant invention is directed to a single layer wherein catalyst A and catalyst B are substantially uniform, i.e. mixed, throughout the thickness of the layer such that substantially equal amounts of catalyst A and B are found in the top and bottom parts of the single layer. The Examiner appreciated the differences between the layers of Sung and the claimed invention.

Although the term "homogenous" is not explicitly recited in the instant specification, the Examiner tended to agree that the detailed examples set forth in the specification provide support for "a homogenous mixed layer of said first catalyst metal and said second catalyst metal". Nevertheless, the Examiner recommended that Applicant clearly explain that, based on the specific inventive examples, one skilled in the art would have readily recognized that the inventive 1-layer is a homogenous mixture of the first and second catalyst metals. In particular, because the slurry/support is first milled and then both the catalysts are added thereto, there is no preferential binding to different sized particles which would result in a gradient being formed.

Again, Applicant greatly appreciates the Examiner's time and thoughtful consideration which resulted in a productive interview.

### **Novelty and Nonobviousness**

Applicant respectfully submits that the claimed invention is novel and unobvious. Specifically, the instant invention as set forth in the amended claims is directed an exhaust treatment device which comprises a 1- catalyst layer deposited on a substrate as a combined loading on a support forming a homogenous mixed layer of the first and said second catalyst metals.

Although the specification does not provide *ipsis verbis* support for the term “homogenous”, Applicant respectfully submits that based on the specific examples set forth in the specification, one of ordinary skill in the art would have readily understood and recognized that the claimed 1- catalyst layer comprises a homogenous mixture of a first catalyst metal and a second catalyst metal throughout the thickness of the layer. In other words, the claimed 1- catalyst layer is not a gradation of a first catalyst to a second catalyst such that more of one catalyst is found at the bottom of the layer and more of the other catalyst is found at the top of the layer.

Specifically, one of ordinary skill in the art would readily recognize that paragraph [0064] of the specification as published necessarily results in a “homogenous mixed layer” of the first catalyst and the second catalyst. As set forth in the inventive examples, the slurry (support) is milled and then both the first and second catalyst metals are added thereto (i.e. combined loading) without preferential adhesion/binding to different sized support particles. Because of the “combined loading” and the lack of preferential adhesion/binding, one supported catalyst metal does not preferentially locate to the top part of the layer over the other supported catalyst metal such that a gradient is formed. Thus, one of ordinary skill in the art would readily recognize that the claimed 1-catalyst layer is a homogenous mixed layer of a first and second catalyst.

Applicant respectfully submits that Sung does not teach or suggest a homogenous mixed layer as set forth in the instant claims. In fact, as previously submitted, the layer of Sung is a gradient, i.e. a gradation of a first catalyst and a second catalyst such that more of one catalyst is found at the bottom of the layer and more of the other catalyst is found at the top of the layer. Such a gradient layer is essentially a two-layer system. As previously submitted, the claimed

invention having a 1- catalyst layer which is a homogenous mixed layer of a first and second catalyst metal provides unexpected superior results over a two-layer system. Nowhere does Sung teach or suggest the advantages of a single homogenous layer.

In fact, Sung specifically teaches the necessity of a gradient layer. Thus, Sung teaches away from a homogenous mixed layer according to the instant invention.

None of the secondary references cited by the Examiner, i.e. Fujitani, Anatoly, and Foster, alone or in combination, alleviate the deficiencies of Sung. Specifically, Fujitani, Anatoly, and Foster do not teach or suggest a homogenous mixed layer as claimed or its advantages. Even so, because Sung teaches away from a homogenous mixed layer, the gradient layer of Sung can not be modified to be a homogenous mixed layer.

Therefore, Applicant respectfully submits that the claimed invention is novel and unobvious and all the art rejections of record should properly be withdrawn.

#### **Request for Rejoinder**

Applicants respectfully request rejoinder of withdrawn claims 14-17, 19-20 and 23-24. Should the Examiner deem that rejoinder is inappropriate, Applicant respectfully request that the Examiner telephone the undersigned in order to authorize an Examiner's Amendment.

#### **Request for Interview**

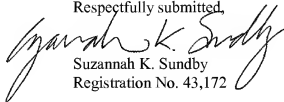
Either a telephonic or an in-person interview is respectfully requested should there be any remaining issues.

### CONCLUSION

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Therefore, it is respectfully requested that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Official action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, in the event that additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. 1.136(a), and any fees required therefor are hereby authorized to be charged to **Deposit Account No. 024300**, Attorney Docket No. **034166.053**.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Suzannah K. Sundby', is written over the typed name and registration number.

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